

### **AMENDMENTS TO THE CLAIMS**

The listing of claims will replace all prior versions, and listings, of claims in the application.

1. (Currently Amended) A method for producing gas from a subterranean formation containing a coal seam, comprising the steps of:

drilling at least one substantially vertical well bore into the subterranean formation, which intersects the coal seam,

fracturing the coal seam using a hydrajetting tool at a pressure less than a fracture pressure of the subterranean formation to produce at least one pair of opposed bi-wing fractures formed by erosion of the subterranean formation substantially along a plane of maximum stress, wherein the fracturing minimizes the creation of near-well-bore stresses, and

performing an additional fracturing subsequent to the step of fracturing the coal seam using the hydrajetting tool.

2. (Original) The method of claim 1, further comprising the step of casing the at least one substantially vertical well bore.

3. (Original) The method of claim 2, further comprising the step of perforating the casing with the hydrajetting tool.

4. (Previously Presented) The method of claim 1, further comprising the step of removing water from the coal seam of the subterranean formation.

5. (Original) The method of claim 1, further comprising the step of inserting logging equipment into the at least one substantially vertical well bore.

6. (Original) The method of claim 1, wherein during the fracturing step the hydrajetting tool produces a plurality of pairs of opposed bi-wing fractures.

7. (Cancelled)

8. (Currently Amended) A method for producing gas from a subterranean formation containing a coal seam, comprising the steps of:

drilling at least one substantially vertical well bore into the subterranean formation, which intersects the coal seam,

fracturing the coal seam using a hydrajetting tool at a pressure less than a fracture pressure of the subterranean formation to produce at least one pair of opposed bi-wing fractures substantially along a plane of maximum stress, wherein the fracturing minimizes the creation of near-well-bore stresses,

drilling at least one horizontal well bore into the coal seam,

fracturing the coal seam along the horizontal well bore using a hydrajetting tool at a pressure less than the fracture pressure of the subterranean formation to produce at least one pair of opposed bi-wing fractures formed by erosion of the subterranean formation, wherein the fracturing minimizes the creation of near-well-bore stresses, and

performing an additional fracturing subsequent to the step of fracturing the coal seam using the hydrajetting tool along the horizontal well bore.

9. (Original) The method of claim 8, further comprising the step of casing the at least one substantially vertical well bore and the at least one horizontal well bore.

10. (Original) The method of claim 9, further comprising the step of perforating the casing with the hydrajetting tool.

11. (Previously Presented) The method of claim 8, further comprising the step of removing water from the coal seam of the subterranean formation.

12. (Original) The method of claim 8, further comprising the step of inserting logging equipment into the at least one substantially vertical well bore.

13. (Original) The method of claim 8, wherein during the fracturing steps the hydrajetting tool produces a plurality of pairs of opposed bi-wing fractures.

14. (Cancelled)

15. (Currently Amended) A method for producing gas from a subterranean formation containing a coal seam, comprising the steps of:

drilling at least one substantially vertical well bore intersecting the coal seam,  
logging the subterranean formation by inserting logging equipment into the at  
least one substantially vertical well bore,  
casing the at least one substantially vertical well bore,  
fracturing the coal seam along the substantially vertical well bore using a  
hydrajetting tool at a pressure less than a fracture pressure of the subterranean formation to  
produce at least one pair of opposed bi-wing fractures formed by erosion of the subterranean  
formation substantially along a plane of maximum stress, wherein the creation of near-well-bore  
stresses is minimized, and  
performing an additional fracturing subsequent to the step of fracturing the coal  
seam using the hydrajetting tool.

16. (Original) The method of claim 15, further comprising the step of perforating the casing with the hydrajetting tool.

17. (Previously Presented) The method of claim 15, further comprising the step of removing water from the coal seam of the subterranean formation.

18. (Original) The method of claim 15, wherein during the fracturing step the hydrajetting tool produces a plurality of pairs of opposed bi-wing fractures.

19. (Cancelled)

20. (Currently Amended) A method for producing gas from a subterranean formation containing a coal seam, comprising the steps of:

drilling at least one substantially vertical well bore intersecting the coal seam,  
logging the subterranean formation by inserting logging equipment into the at  
least one substantially vertical well bore,  
casing the at least one substantially vertical well bore,  
drilling a plurality of substantially horizontal well bores disposed substantially  
within the coal seam and exiting from the at least one substantially vertical well bore, wherein  
the plurality of substantially horizontal well bores is spaced to maximize interference between  
the substantially horizontal well bores,

casing the plurality of substantially horizontal well bores,  
fracturing the coal seam along the substantially vertical well bore using a  
hydrajetting tool at a pressure less than a fracture pressure of the subterranean formation to  
produce at least one pair of opposed bi-wing fractures formed by erosion of the subterranean  
formation substantially along a plane of maximum stress, wherein the creation of near-well-bore  
stresses is minimized,

fracturing the coal seam along the plurality of substantially horizontal well bores  
using a hydrajetting tool at a pressure less than the fracture pressure of the subterranean  
formation to produce a plurality of fractures formed by erosion of the subterranean formation,  
wherein the plurality of fractures is spaced to maximize interference between fractures and  
wherein the plurality of fractures enhances the production of gas from the coal seam of the  
subterranean formation, and

performing an additional fracturing subsequent to the step of fracturing the coal  
seam using the hydrajetting tool along the plurality of substantially horizontal well bores.

21. (Original) The method of claim 20, further comprising the step of perforating the  
casing with the hydrajetting tool.

22. (Previously Presented) The method of claim 20, further comprising the step of  
removing water from the coal seam of the subterranean formation.

23. (Original) The method of claim 20, wherein during the fracturing steps the  
hydrajetting tool produces a plurality of pairs of opposed bi-wing fractures.

24. (Cancelled)

25. (Previously Presented) The method of claim 1 wherein the step of performing the  
additional fracturing is performed using a hydrajetting tool.

26. (Previously Presented) The method of claim 8 wherein the step of performing the  
additional fracturing is performed using a hydrajetting tool.

27. (Previously Presented) The method of claim 15 wherein the step of performing  
the additional fracturing is performed using a hydrajetting tool.

28. (Previously Presented) The method of claim 20 wherein the step of performing the additional fracturing is performed using a hydrajetting tool.